A Method of ascertaining the Relative Position of Unerupted Teeth by means of Film Radiographs.

By CHARLES A. CLARK, L.D.S.

THE method I am about to describe is especially useful for fidgety, nervous children, where a stereoscopic view is quite impossible, because it does not matter in the least if the child moves about between the taking of each radiograph. It first occurred to me when radiographing superimposed buried teeth in the incisive and canine region owing to the difficulty of deciding which tooth is in front of the other, both, of course, being penetrated by the rays. If we have two objects, one behind the other, the one at the back is hidden by the one in front. But if we obtain a view from either side, then, of necessity, they both come into view more or less, as the angle at which they are viewed. So that, if we wish to ascertain on which side of the median line a buried canine is lying, three radiographs are taken: the first directly over the suspected tooth, and which we will call the *central* position, and another *mesial* to this position, while the third is taken *distal* of the first or central position. In some cases it is necessary to take a radiograph to first find the tooth and also to get some idea of its location. Each of the three radiographs must be marked immediately they are taken, or confusion will arise. With the three radiographs placed in their relative position, we carefully note the position of each tooth shown in the central radiograph, and by comparing it with the other two the position of the buried tooth, whether it is on the palate or whether it is situated labially, can be ascertained readily with a little practice. It may perhaps be better in some cases to take five radiographs instead of three —viz., one central, and two mesial and two distal, each of which is at a different angle; because, if there are teeth adjacent and crowded, the premolars on one side and incisors on the other, the angle may be too much or too little to guide us.

In the mesial radiograph the supernumerary is seen to be more over the canine, or, putting it another way, the lateral has come more into view; therefore the supernumerary must be situated labially. The distal radiograph shows it more over the lateral than is to be seen in the central radiograph. Through the courtesy of the surgeon for whom

I took this case I am able to show you a model taken subsequently, and you will see that the opinion that the supernumerary is situated labially is confirmed.

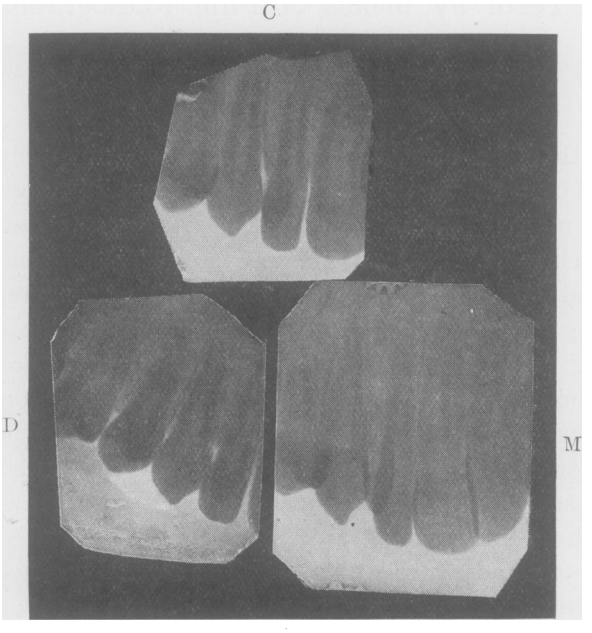

FIG. 1.

Upper left: case of a supernumerary adjoining a lateral. In the central radiograph the supernumerary is seen over the lateral and touching the canine.

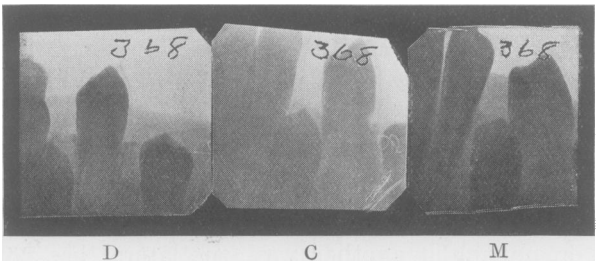

FIG. 2.

Lower left: Central radiograph shows the unerupted canine between the lateral and first premolar.

The distal radiograph shows a space between the canine and first premolar; it is therefore situated labially. If this is so, then the mesial radiograph will also show a space between the lateral and canine, which is so. This case shows the advantage of this method, as it was that of a very nervous child who refused to sit still. At last, after much difficulty, I obtained one in the central position; again, after much trouble, the child meanwhile moving about, in the mesial and distal position. As it was impossible to get the child to sit still a moment, the exposure given to each was only a fraction of a second. An exposure of a few seconds only would have resulted in this case in total failure.

DISCUSSION.

The PRESIDENT (Mr. Hern) said the method described by Mr. Clark for ascertaining the relative positions of unerupted teeth was a very ingenious one. Anything that would give such information was of great value in practical work. He had seen something of Dr. Mackenzie Davidson's method of stereoscopic work in discovering the position of shots and bullets, and had been greatly surprised at the results obtained by a good stereoscopic photograph as compared with an ordinary one. If the same results could be obtained in connexion with teeth by Mr. Clark's method, it would be exceedingly valuable.

Mr. DOUGLAS GABELL said the only objection he could see to the method, which he had seen employed at the Royal Dental Hospital, was that it only showed whether a tooth was inside or outside the arch but did not give any distance, and therefore it was not possible to tell how far the tooth was inside or outside.

The PRESIDENT, referring to the film-holders, asked whether they could be turned upside down for the upper or lower, throwing the teeth downwards for the lower and upwards for the upper.

Mr. CLARK said not. He usually got the patients to bite on the top for the lower incisor regions, but for the upper incisor regions it was necessary to have the extension backwards. In the bicuspid region he preferred the extension, as otherwise there was a tilting up.

Mr. RILOT asked whether Mr. Clark trusted to the patient holding the apparatus firmly between the teeth, or whether he tied the jaws together. Some people had a habit of letting the jaws relax at the critical moment.

Mr. BADCOCK asked what the little disk was used for.

Mr. CLARK, in reply, said the method of ascertaining the relative position of teeth was designed really more for fidgety children where stereoscopic views could not be taken. He claimed it was an advantage over the ordinary way of taking a photograph on one flat negative. Taking, for instance, a buried upper canine, it was not possible to tell for certain by the ordinary method whether it was on the palate or situated labially, but the method he had introduced would give that information. Considering that the depth from the labial to the palatal surface was not very great, he thought it practically met all the needs. With regard to Mr. Rilot's question, he relied on the patient biting, and had not found much difficulty in that respect. The little disk was an extension for the bite on the other side of the mouth; it could be bent backwards and forwards for adjustment to the teeth.